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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,450	10/03/2000	Leonard J. Galasso	155607-0086 (P002XD)	7543

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02/02/2004

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EXAMINER

MCARDLE, JOSEPH M

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,450

Applicant(s)

GALASSO ET AL.

Examiner

Joseph McArdle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 0200.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37,38,40,43-45,47 and 48 is/are rejected.
- 7) ☒ Claim(s) 39, 41, 42, 46, 49, 50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Applicant did not cite the serial number of the co-pending application on page 11, line 15 of the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 37, 45, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rawson (5265252) in view of Davis (5844986). In regards to claim 37, Rawson discloses in column 4, lines 3-5 that application programs are able to access I/O devices by making system calls to the operating system. Rawson further discloses in column 4, lines 12-16 that operating system specific device drivers issue commands to a device driver interface, which in turn directs the requests to appropriate class drivers (column 4, lines 28-30) so the I/O devices can be accessed. These

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disclosures meet the limitations set forth under claims 37, 45, 51 and 52 that call for having an access driver generate a request to use Basic Input/Output System services (see column 4, lines 12-16). However, Rawson makes no mention of providing security for issued commands through the use of signatures and cryptographic key pairs. Davis (5844986) teaches in column 1, lines 46-49, that there is a need for protecting BIOS access from things such as intrusive attacks. Davis then goes on to disclose in column 3, lines 66-67 through column 4, lines 1-4, that public/private key cryptography can be used as part of an authentication procedure, specifically using the well-known techniques of digital signatures and certificates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Davis's teachings on the need for protecting BIOS through the use of public/private key cryptography, digital signatures and certificates into Rawson's design in order to achieve a design that is capable of validating the integrity of service requests from various access drivers.

3. In regards to claim 38, Rawson discloses in column 4, lines 12-16, that operating system specific device drivers issue commands over a device driver interface so that the device driver interface may forward then through to a mapping layer so that they can eventually be received at an appropriate I/O device. This disclosure meets the limitations set forth under claim 38, which calls for allowing the access driver to generate requests to establish communications with an interface. However, Rawson makes no mention of allowing the requests to contain a signature that was created

using a private key in a cryptographic key pair. Davis (5844986) teaches in column 1, lines 46-49, that there is a need for protecting BIOS access from things such as intrusive attacks. Davis then goes on to disclose in column 3, lines 66-67 through column 4, lines 1-4, that public/private key cryptography can be used as part of an authentication procedure, specifically using the well-known techniques of digital signatures and certificates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Davis's teachings on the need for protecting BIOS through the use of public/private key cryptography, digital signatures and certificates in order to achieve a design that is capable of validating the integrity of service requests from various access drivers.

4. In regards to claims 40 and 44, Davis further discloses in column 4, lines 28-37, that digital certificates are employed in order to authenticate any changes associated with the BIOS. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Davis's teachings on the use of providing certificates for validating and authenticating and possible BIOS changes into Rawson's design in order to achieve a design that is capable of allowing an interface to generate and send authority certificates to an access driver which uses the certificate to generate future session requests.

5. In regards to claim 43, Davis further discloses in column 4, lines 31-37, that a public key can be used in order to verify a digital signature or a digital certificate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Davis's teachings on the using digital signatures for verification and

authentication purposes into Rawson's design in order to achieve a design that is capable of allowing the authority certificate to contain a certificate signature.

6. In regards to claim 47, Rawson further discloses in column 5, lines 11-23, that a command initiator is used to enable the desired BIOS operation (such as a disk read) that was desired by the initial request. This meets the limitations set forth under claim 47, which call for performing the BIOS service specified by the service request.

7. In regards to claim 48, Rawson discloses in column 4, lines 3-5 that application programs are able to access I/O devices by making system calls to the operating system. Rawson further discloses in column 4, lines 12-16 that operating system specific device drivers issue commands/requests to an interface, which in turn directs the requests to appropriate class drivers (column 4, lines 28-30) so the I/O devices can be accessed. This meets the limitations set forth under claim 48 that call for creating a request to establish a connection with an application interface. However, Rawson makes no mention of providing security for issued commands through the use of signatures and cryptographic key pairs. Davis (5844986) teaches in column 1, lines 46-49, that there is a need for protecting BIOS access from things such as intrusive attacks. Davis then goes on to disclose in column 3, lines 66-67 through column 4, lines 1-4, that public/private key cryptography can be used as part of an authentication procedure, specifically using the well-known techniques of digital signatures and certificates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Davis's teachings on the need for protecting BIOS through the use of public/private key cryptography, digital signatures and certificates

into Rawson's design in order to achieve a design that is capable of validating the integrity of session request.

8.

Allowable Subject Matter


9. Claims 39, 41, 42, 46, 49, 50 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

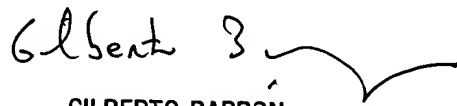
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph McArdle whose telephone number is (703) 305-7515. The examiner can normally be reached on Weekdays from 8:00 am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Joseph McArdle
Examiner
Art Unit 2132

jmm


GILBERTO BARRON
SUPERVISORY PATENT EXAMINER
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